

664.5

This work shall be measured as a unit, complete and in place.

664.5-BASIS OF PAYMENT:

The quantities, determined as provided above, shall be paid for at the contract unit price for the items listed below, which prices and payment shall be full compensation for furnishing all the materials and doing all work prescribed in a workmanlike and acceptable manner, including all tools, equipment, supplies, and incidentals necessary to complete and, where required, winterize the items. All incidental work and materials for which no basis of payment is provided will be considered as completely covered by the prices bid for the items included in the contract.

664.6-PAY ITEMS:

ITEM	DESCRIPTION	UNIT
664001-*	IMPACT ATTENUATING DEVICE, TYPE "type"	EACH

*Sequence #

SECTION 665
PLUGGING GAS, OIL, AND DRILLED WATER WELLS

665.1-DESCRIPTION:

This work shall consist of plugging oil wells as designated on the Plans. This work shall also consist of plugging drilled water wells unless otherwise noted on the Plans.

665.2-MATERIALS:

665.2.1-Oil and Gas Wells: All materials used for plugging the oil wells and gas wells shall meet the requirements of the laws of the State of West Virginia.

665.2.2-Drilled Water Wells: Materials for plugging water wells shall meet the requirements of Division 700 as follows:

MATERIAL	SUBSECTION
Bentonite	715.45
Aggregate	703

Concrete shall be class D conforming to applicable requirements of 601 and may be with or without air entrainment at the option of the Contractor. The concrete shall be placed in accordance with current regulations of the Oil and Gas Division of the Department of Mines when a coal seam is involved.

CONSTRUCTION METHODS

665.3-GENERAL:

The Division will obtain all necessary permits, bonds and licenses required for this work.

665.4-PLUGGING GAS AND OIL WELLS:

The Contractor shall plug the gas well or oil well prior to starting any other construction in the vicinity of the well. The well shall be plugged using bentonite mud and neat cement as provided for by law, and the work shall be accomplished by a qualified service company meeting the approval of the Gas and Oil Division of West Virginia Department of Mines. All work pertaining to plugging the well must be performed under the supervision of the representative of the Division of Mines. The Contractor shall notify the Project Engineer and the Division of Mines at least 14 days in advance of the date on which the Contractor intends to begin work.

The Division will make available upon request copies of Sections 9 and 10, Article 4, Chapter 22 of the Gas and Oil Laws.

665.5-Plugging Drilled Water Wells: The Contractor shall plug all drilled water wells within the right-of-way limits prior to starting any other work in the vicinity of the wells. The wells shall be filled from the bottom with a mixture of aggregate and bentonite mud to within 20 ft. (6 m) of the surface. The aggregate for each specific site may be any of the following AASHTO sizes: 7, 57, or 67. The bentonite shall be proportioned with fresh water as follows: eight percent bentonite by volume (minimum) to 92 percent by volume fresh water (maximum). The final in-place product shall be a consistent mixture of bentonite mud and aggregate. The upper 20 ft. (6 m) shall be plugged using Class D or other suitable concrete. All coal seams of 24 in. (600 mm) or more in thickness or a seam that is being mined that the well encounters or passes

if the well passes through the coal, or from the base of the coal seam, if the well ends within the coal seam, to 20 ft. (6 m) above the coal seam.

The Contractor at their option may plug all drilled water wells from the bottom of the well to the surface with Class D or other suitable concrete in lieu of the bentonite mud and aggregate.

665.6-METHOD OF MEASUREMENT:

Plugging gas wells, oil wells, and drilled water wells will be measured by the unit.

665.7-BASIS OF PAYMENT:

The quantity, determined as provided above, will be paid for as provided below, which price and payment shall constitute full compensation for

furnishing all material, labor, tools, equipment and all incidentals necessary to complete this work.

665.8-PAY ITEMS:

ITEM	DESCRIPTION	UNIT
665001-*	PLUGGING GAS WELL	EACH
665002-*	PLUGGING OIL WELL	EACH
665003-*	PLUGGING DRILLED WATER WELL	EACH

*Sequence #

666-669-BLANK:

SECTION 670 WATERLINE INSTALLATION

670.1 – DESCRIPTION:

This work shall consist of the construction or relocation of waterlines, including installation of valves and valve boxes, casing pipe, fire hydrants, water meters, meter boxes, and all required appurtenances all in reasonably close conformity with lines, grades, dimensions and locations shown on the Plans or established by the Engineer.

670.2–MATERIALS:

The material shall meet the requirements of the following subsections.

MATERIAL	SUBSECTION
Controlled Low Strength Material, Type A	219
Ductile Iron Pipe	718.1
Cement lining	718.1.1
Fittings	718.1.2
Mechanical Joints	718.1.3
Push-On Joints	718.1.3
Flanged Joints	718.1.4
Plastic Pipe (PVC)	718.5
Plastic Pipe (Polyethylene)	718.7
Plastic Pipe Fittings	718.8
Copper Service Line	718.9
Copper Service Line Fittings	718.9.1
Gate Valves	718.10
Valve Boxes	718.11
Casing Pipe (Steel)	718.12
Fire Hydrants	718.13
Meters	718.14
Miscellaneous Steel	718.15